Applicability of Broadband Services to Households in Sri Lanka: A study covering Western Province

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DECLARATION

"I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any University to the best of my knowledge and belief it does not contain any material previously published, written or orally communicated by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans, and for the title and summary to be made available to outside organizations"

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Signature of the Candidate Date

To the best of my knowledge, the above particulars are correct.

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ABSTRACT

Although development and diffusion of information and communication technologies (ICT) have become major policy objectives around the world since the early 1990s, the order, speed, and range of nationwide ICT deployment vary by country. Moreover, in most cases, pre-existing conditions, such as economic development level and geography, have been found to work as major determining factors for this variation.

In Sri Lanka, still the ICT development is at a introductory stage. Even though the technology has diffused to certain extent in western province, the other areas are to be developed with basic infrastructure facilities. Competition was introduced to the telecommunications in 1994 but still the country's teledensity is 165 per 1000 persons.

Field research focused on Western province which has the highest population and the highest teledensity among other provinces.

Since the Television penetration (85.8%) supersedes the Personal computer (9.9%) in Sri Lanka, operators should aim to provide broadband services through Television.

Recently, Korea has succeeded in nationwide adoption of broadband Internet, drawing huge attention across the world. Therefore this study addresses the question of whether the Korean case can offer some valuable lessons and insights to many other countries seeking more effective ICT development. To answer the question, this study attempts to identify and analyze the contributing factors and conditions under which broadband technology has been adopted successfully in Korea. In so doing, special foci are placed on both the relationship between government and market and the socio-cultural characteristics of Korean Internet users.

The level of economic development and high population density in urban area are discussed as important contributing factors for successful broadband adoption.

However, these factors alone do not ensure successful development of this technology. A series of policy implementation strategies and campaigns tapping into underlying socio-cultural values (e.g. attitudes toward information technology and education) also identified as other main factors for successful broadband adoption.

Although existing economic development levels and basic infrastructure may be critical factors for initial adoption of the Internet, when explaining more advanced broadband

uptake, other factors are also operating, which can be broadly entitled as the "socio-cultural value system."

The Korean success story does offer an effective adoption/diffusion strategy, if not a viable policy model, for more advanced ICT in developing regions.

Especially for countries like Sri Lanka, lacking advanced economies or infrastructures, task-oriented government initiatives and support are even more important. In addition, campaign strategies focusing on public need and demand appear critical for Broadband adoption, although the goal of Broadband adoption may be to achieve economic development. When Implementing broadband technologies Sri Lanka has the social-economic advantages like high literacy (92.5%), growth of private sector etc.

Furthermore, when providing broadband solutions, it should be targeted for different requirements of different members of households. Basically Broadband technology could be implemented for social and economic well-being of the country.

Finally, results from this analysis suggest that more research and cooperation are needed to develop indices and measures that accurately reflect the socio-cultural values factor that facilitates the adoption of Broadband in Sri Lanka.

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List of Acronyms and Abbreviations

- 3G Third Generation of mobile communications technology
- ADSL Asymmetrical Digital Subscriber Line
- APEC Asia Pacific Economic Cooperation
- ARPU Average Revenue Per User
- ASEAN Association of South East Asian Nations
- DSL Digital Subscriber Line
- EDI Electronic Data Interchange
- Gbps Giga bits per second
- GDP Gross Domestic Product
- GNP Gross National Product
- GNI Gross National Income
- GSM Global System for Mobile Communication
- ICT Information and Communication Technology
- IMF International Monetary Fund
- IP Internet Protocol
- ISP Internet Service Provider
- IT Information Technology
- ITU International Telecommunication Union
- KISDI Korea Information Society Development Institute
- KOREN Korea Advanced Research Network
- KORNET Korea Telecom 's Internet Service Provider
- KREN Korean Education Network
- KRW Korean Won, Korea 's national currency (see Won).
- KT Korea Telecom Corporation
- LAN Local Area Network
- Mbps Mega bits per second
- MHz Megahertz

- MIC Ministry of Information and Communications
- MMS Multimedia messaging service
- NCA National Computerization Agency
- OECD Organization of Economic Cooperation and Development
- PC Personal Computer
- PDA Personal digital assistant
- R&D Research and Development
- TCP/IP Transmission Control Protocol/Internet Protocol
- TV Television
- UN United Nations
- VDSL Very high-bit rate Digital Subscriber Line
- VoIP Voice over Internet Protocol
- WLL Wireless Local Loop